

21 end

32. (New) A plasma processing method according to claim 31, wherein said workpiece is a semiconductor wafer.--

REMARKS

By this amendment, claims 12-22 have been cancelled without prejudice or disclaimer and claims 23-32 have been added.

In the Office Action, claims 12, 14, 16, and 17 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent 5,494,522 (Moriya et al.); claim 13 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Moriya et al. in view of U.S. Patent 5,779,807 (Dornfest et al.); claim 14 was rejected under 35 U.S.C. § 103(a) as being unpatentable over Moriya et al. in view of U.S. Patent 5,779,807 (Dornfest et al.); and claims 18-22 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Moriya et al. Applicants traverse the rejections to the extent that the Examiner may consider applying them to new claims 23-32.

Claim 23 relates to a plasma processing method, comprising a step in which a workpiece is placed at a mounting surface of an electrode provided inside a plasma processing chamber; a step in which said workpiece is electrostatically held by applying a high level DC voltage to an electrostatic chuck provided at said mounting surface of said electrode; a step in which plasma processing is performed on said workpiece under a reduced pressure atmosphere; a step in which said electrode is moved from an upper plasma processing position to a lower delivery position after said plasma processing ends; and a step of opening a means for opening/closing which switchably connects said delivery chamber to said plasma processing chamber for transfer of said workpiece from/to said plasma processing chamber during the moving operation of said electrode,

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wherein the pressure inside said delivery chamber is sustained at a higher pressure than the pressure inside said plasma processing chamber.

Claim 28 relates to a plasma processing method, comprising a step in which a workpiece is placed at a mounting surface of an electrode provided inside a plasma processing chamber; a step in which said workpiece is electrostatically held by applying a high level DC voltage to an electrostatic chuck provided at said mounting surface of said electrode; a step in which plasma processing is performed on said workpiece under a reduced pressure atmosphere; a step of opening a means for opening/closing which switchably connects said delivery chamber to said plasma processing chamber for transfer of said workpiece from/to said plasma processing chamber after the step of plasma processing, wherein the pressure inside said delivery chamber is sustained at a higher pressure than the pressure inside said plasma processing chamber; and a step in which said electrode is moved from an upper plasma processing position to a lower delivery position after the means for opening/closing is opened.

None of the cited art, alone or in combination, teaches or suggests all the features of independent claims 23 and 28. For example, regarding claim 23, each of the references relied on by the Examiner fails to teach or suggest any plasma processing method having all of the claimed steps, including, for example, a step in which an electrode is moved from an upper plasma processing position to a lower delivery position after said plasma processing ends. Regarding claim 28, each of the references relied on by the Examiner fails to teach or suggest any plasma processing method having all of the claimed steps, including, for example, a step in which an

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electrode is moved from an upper plasma processing position to a lower delivery position after the means for opening/closing is opened.

Moriya et al. relates to a plasma processing system having an etching chamber 301 and a load lock chamber 302. A wafer W can be mounted on a lower electrode 308 arranged in the etching chamber 301. A coolant circulating passage 309 is formed in the lower electrode 308 to cool the wafer W. Pipes 332 and 333 are connected to the circulating passage 309 and coolant is circulated through the passage 309 and pipes 332, 333. See col. 10, lines 41-65.

There is nothing in the reference to suggest that the lower electrode is moveable. Specifically, there is no mechanism disclosed for moving the lower electrode 308 up and down because such movement would interfere with the cooling function and structural arrangement of the pipes 332, 333 and the passage 309. Therefore, Moriya et al. does not anticipate the invention as recited in claims 23 and 28.

Dornfest et al. relates to an electrostatic technique for removing particulate matter from a semiconductor wafer in a plasma processing chamber. See abstract. The reference describes a chamber having an upper electrode 14 and a lower electrode in the form of a susceptor 16 to support a semiconductor wafer or substrate 18. As in Moriya et al. there is no mechanism disclosed for moving the lower electrode 16 up and down. Therefore, Dornfest et al. does not anticipate the invention as recited in claims 23 and 28.

To establish a *prima facie* case of obviousness, three criteria must be met. First, there must be some motivation or suggestion, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the

reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Third, the prior art references must teach or suggest all the claim limitations. See MPEP § 2142.

Neither Moriya et al., nor Dornfest et al., taken alone or in combination, teaches or suggests all of the recited features of claims 23 and 28. As described above, neither reference teaches a plasma processing method including a step in which an electrode is moved from an upper plasma processing position to a lower delivery position after a plasma processing ends, as required by claim 23, or a step in which an electrode is moved from an upper plasma processing position to a lower delivery position after the means for opening/closing is opened, as required by claim 28.

Claims 24-27 and 29-32 depend from one of independent claims 23 and 28. Thus, these claims are patentable for at least the reasons set forth above. Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw the rejection of these claims.

In view of the foregoing amendments and remarks, Applicants respectfully request the reconsideration and reexamination of this application and the timely allowance of the pending claims.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

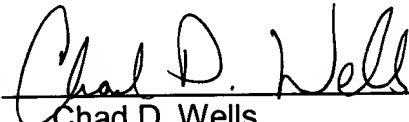
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Respectfully submitted,

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Dated: December 27, 2002

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